

REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

I. Status of the Application

Claims 1 - 4 are currently pending in this application. Dependent claims 3 and 4 are amended to respectively include the limitations of based claims 1 and 2, and new claims 5 and 6 are added. No new matter is introduced. Support for the amendments may be found, for example, at page 6, line 23 through page 7, line 4 and page 16, lines 17 - 20 of Applicants' specification.

II. Objected Claims

Applicants thank the Examiner for indicating that claims 3 and 4 are objected to as depending respectively from rejected base claims 1 and 2, but that each of claims 3 and 4 would be allowable if rewritten in independent form including all of the limitations of its respective base claim. Applicants amend claims 3 and 4 accordingly, and respectfully submit that amended claims 3 and 4 are thereby placed in condition for allowance.

III. Rejection under 35 U.S.C. § 103

Claims 1 and 2 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,041,406 to Kambara et al. ("Kambara") in view of Japanese Patent Publication No. JP 11-086698 to Saijo Masaru et al. ("Masaru"). Applicants respectfully traverse this rejection.

In independent claims 1 and 2, Applicants disclose:

1. A pointing input device comprising:

a display panel for displaying any pointing input information on a display area thereof;

a transparent protective plate laminated on the display area of the display panel;

a piezoelectric substrate attached to the transparent protective plate, for converting deformation caused by a push against the transparent protective plate into an electric signal and outputting the electric signal; and

an optical touch panel disposed on the transparent protective plate, for emitting light beams for reticulately scanning an input operation area of the optical touch

panel along orthogonal X and Y directions to detect a pointing input and a pointing input position in the input operation area when the light beams are intercepted by the pointing input, a display area of the input operation area being visible through the transparent protective plate;

the pointing input device outputting pointing position data indicating the pointing input position, while the optical touch panel detects the pointing input,

the pointing input device outputting push detection data together with the pointing position data, when the electric signal is outputted from the piezoelectric substrate and the push against the transparent protective plate is judged while the optical touch panel is detecting the pointing input.

2. A pointing input device comprising:

a display panel for displaying any pointing input information on a display area thereof;

a transparent protective plate laminated on the display area of the display panel;

a piezoelectric substrate attached to the transparent protective plate, for converting deformation caused by a push against the transparent protective plate into an electric signal and outputting the electric signal; and

an optical touch panel disposed on the transparent protective plate, for emitting light beams for reticulately scanning an input operation area of the optical touch panel along orthogonal X and Y directions to detect a pointing input and a pointing input position in the input operation area when the light beams are intercepted by the pointing input, a display area of the input operation area being visible through the transparent protective plate,

the pointing input device outputting pointing position data detected by the optical touch panel when the electric signal is outputted from the piezoelectric substrate and the push against the transparent protective plate is judged while the optical touch panel is detecting the pointing input.

Kambara discloses an acoustic touch sensing device including an acoustic wave transducer for propagating a bulk acoustic wave through a substrate along an axis intersecting a surface of the substrate (see, e.g. FIG. 5 of Kambara). Gratings and reflecting arrays are employed on the surface of the substrate to generate directed surface waves from the bulk acoustic wave. Because the surface waves can be disturbed by touching a display area of the surface, a touching of the display area can be sensed.

The Examiner acknowledges that Kambara fails to disclose Applicants' claimed optical touch panel, but suggests that this feature is disclosed by Saijo. Saijo discloses an optical touch

panel having a light shielding member that overlays each of a light emitting element line and a light receiving line, which combination may be paired orthogonally to form the sensing portion of an optical touch screen (see, e.g., figure accompanying Patent Abstract for Saijo).

To establish a *prima facie* case of obviousness, three basic criteria must be met. MPEP § 2143. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Applying the third requirement for making a *prima facie* case of obviousness, Applicants respectfully submit that insufficient motivation exists for combining the teachings of the Kambara and Saijo references for the purpose of suggesting Applicants' device as claimed in independent claims 1 and 2.

The necessary indicia for demonstrating a sufficient motivation to combine prior art references are described in MPEP § 2143.01. For example:

"In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

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The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (Claims were directed to an apparatus for producing an aerated cementitious composition by drawing air into the cementitious composition by driving the output pump at a capacity greater than the feed rate. The prior art reference taught that the feed means can be run at a variable speed, however the court found that this does not require that the output pump be run at the claimed speed so that air is drawn into the mixing chamber and is entrained in the ingredients during operation. Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." 916 F.2d at 682, 16 USPQ2d at 1432.). See also *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992) (flexible landscape edging device which is conformable to a ground surface of varying slope not suggested by combination of prior art references).

Applicants respectfully submit that no such suggestion or motivation is provided by the two references applied in the present case.

Applicants' invention is directed to solve a problem associated with a conventional optical touch panel comprising paired photoreceptor devices arranged linearly arranged along X and Y directions around a perimeter of the panel (see, e.g., page 2, line 4 through page 4, line 10). Specifically, as the device can be activated by the momentary insertion and removal of a finger or pen within an interior area of the perimeter scanned by the photoreceptor devices, it becomes easy for the device to be unintentionally or accidentally activated. Applicants' invention overcomes this problem by coupling the photoreceptor-based device with a piezoelectric touch panel, and requiring each of these two components to indicate an activation before it is judged that the device has been activated.

Saijo is concerned with solving the problem of photoreceptor sensitivity to stray light sources in an optical touch panel, and teaches a method for addressing this problem by providing shielding members that cover the photoreceptors (see, e.g., abstract of Saijo). Saijo does not address or otherwise acknowledge the problem of accidental activation of the device resulting from momentary insertion of a pen or finger, which is the problem addressed by Applicants' claimed invention.

Kambara is concerned with the problem of configuring an acoustic touch sensor device to convert a bulk acoustic wave into surface waves of sufficient power to effectively signal touching at the surface of the device (see, e.g., column 6, lines 37 - 50 of Kambara). Like Saijo, Kambara does not address or otherwise acknowledge the problem addressed by Applicants' claimed invention.

As neither reference provides any motivation for combination with the other to solve the problem addressed by Applicants' claimed invention, Applicants respectfully submit that such motivation is suggested to one of ordinary skill in the art only in hindsight, using Applicants' claimed invention as a "roadmap." It is well established that the use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is impermissible (see, e.g., *W. L. Gore And Assocs. V. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312 - 313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)).

Accordingly, Applicants respectfully submit the Saijo and Kambara references may not be combined in support of an obviousness rejection of independent claims 1 and 2 under 35 U.S.C. § 103, and that independent claims 1 and 2 are therefore allowable. As new claims 5 and 6 respectively depend from allowable independent claims 1 and 2, Applicants further submit that new claims 5 and 6 are also allowable for at least this reason.

CONCLUSION

Therefore, in view of the above amendments and remarks, it is respectfully requested that a Notice of Allowance as to all pending claims be issued in this case.

If there are any other issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

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Respectfully submitted,

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